

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method, comprising:
- ~~receiving diphone waveforms;~~
- compressing ~~the~~ a set of diphone waveforms into a set of diphone residuals,
- ~~wherein the compressing is performed using an encoder;~~
- generating a set of linear predictive coding (LPC) coefficients, ~~wherein the LPC~~
- ~~coefficients are generated by the~~ using an encoder, wherein the generating
- of the LPC coefficients is performed while compressing the diphone
- waveforms; and
- storing the set of diphone residuals and the ~~encoder generated set of~~ LPC
- ~~coefficients in a compressed packet, wherein the compressed packet is~~
- ~~generated by the encoder;~~
- receiving a request from a waveform synthesizer residing on a client for a diphone
- residual for a particular speech output;
- locating the requested diphone residual;
- extracting the located diphone residual from the set of diphone residuals; and
- supplying the diphone residual to the waveform synthesizer on the client to
- produce the particular speech output.
2. (Currently Amended) The method of claim 1, further comprising:
- ~~a waveform synthesizer requesting diphone residuals;~~
- ~~locating the requested diphone residuals in the compressed packet;~~
- ~~extracting the located diphone residuals from the compressed packet;~~
- compressing the set of diphone waveforms into the set of diphone residuals using
- an encoder; and

decompressing the extracted diphone ~~residuals~~ residual, ~~wherein the~~

~~decompressing is performed using a decoder; and~~

~~supplying the diphone residuals to the waveform synthesizer.~~

3. (Currently Amended) The method of claim ~~2-1~~, further ~~comprising~~ comprises supplying the ~~encoder-generated set of~~ LPC coefficients to the waveform synthesizer.
4. (Currently Amended) The method of claim ~~2-1~~, further ~~comprising~~ comprise : supplying pitch marks to the waveform synthesizer.
5. (Currently Amended) The method of claim ~~2-1~~, further ~~comprising wherein the~~ waveform synthesizer to producing produce the particular speech output on the client, the client including a handheld device.
6. (Currently Amended) The method of claim ~~1-2~~, wherein the encoder ~~is~~ comprises a G.723 encoder.
7. (Currently Amended) The method of claim ~~1-2~~, wherein the decoder ~~is~~ comprises a ~~modified~~-G.723 decoder.

Claims 8-11 (Cancelled)

12. (Currently Amended) A system ~~for compressing and using concatenative speech databases in text-to-speech systems~~, comprising:
~~a text-to-speech system;~~
a server comprises a concatenative speech database having compressed diphone residuals and compressed LPC coefficients generated by an encoder while compressing diphone waveforms into the diphone residuals, the server to locate a diphone residual and extract the diphone residual from the compressed diphone residuals in response to a request for the diphone

residual from a waveform synthesizer residing on a client to produce a particular speech output; and

the client coupled with server, the client having the waveform synthesizer to receive the diphone residual and the LPC coefficients and a decoder to decompress the diphone residual and the LPC coefficients to produce the particular speech outputa-coder.

13. (Currently Amended) The system of claim 12, wherein the ~~text-to-speech system~~ server ~~further comprising~~ comprises:

a text analysis module for processing a text into forms of linguistic representations; and

a linguistic and prosodic analysis module for analyzing the forms of linguistic representations corresponding to their assigned language system; and

~~a waveform synthesizer for producing a speech output.~~

14. (Currently Amended) The system of claim 12, wherein the concatenative speech database ~~comprising~~ further comprises

~~diphone waveforms;~~

~~LPC coefficients; and~~

~~pitch marks.~~

15. (Cancelled)

16. (Currently Amended) The system of claim 12, wherein the ~~coder is~~ encoder comprises a G.723-coder encoder.

17. (Currently Amended) The system of claim ~~16, 12,~~ wherein the ~~G.723-coder comprises~~ decoder comprises:

~~a G.723 encoder for compressing the concatenative speech database; and~~

a G.723 decoder for decompressing the concatenative speech database.

Claims 18-27 (Cancelled)

28. (New) The system claim 12, wherein the client is further to receive the pitch marks.
29. (New) An apparatus, comprising:
a server comprises a concatenative speech database having compressed diphone residuals and compressed LPC coefficients, the server to locate a diphone residual and extract the diphone residual from the compressed diphone residuals in response to a request for the diphone residual from a client to produce a particular speech output; and
the client coupled with server, the client having a waveform synthesizer to receive the diphone residual and the LPC coefficients to produce the particular speech output.
30. (New) The apparatus of claim 29, further comprises a coder having an encoder to compress diphone waveforms into the diphone residuals and to generate and compress the LPC coefficients while compressing the diphone waveforms into the diphone residuals, the encoder including a G.723 encoder.
31. (New) The apparatus of claim 30, wherein the coder further includes a decoder to decompress the diphone residual and the LPC coefficients, the decoder including a G.723 decoder.
32. (New) The apparatus of claim 29, wherein the client comprises a handheld device including one or more of the following: a telephone, a pocket computer system, and a personal digital assistant (PDA).